DAM AND RESERVOIR PLAN OF DEVELOPMENT

1. Purpose and Need for the Facility
    a. what will be built
    b. identify the uses(s) of the dam and reservoir, such as fisheries, recreation, irrigation, stock water, wildlife, flood control, industrial or domestic water supply, hydropower, stream flow regulation, etc.
    c. state the period of uses and the functional life of the structure
    d. describe the size of the facility, i.e., the dam dimensions, reservoir surface area, permanent storage capacity, flood storage capacity, related facilities, etc.
    e. is this ancillary to an existing right-of-way
    f. list any alternative locations

2. Right-of-way Location
    a. legal description
    b. maps and drawing

3. Facility Design Factors
    a. must be designed by a Federal Agency professional or a professional engineer licensed by the appropriate state authorities; design criteria are based on State and Federal standards
    b. maps showing the location and detailed engineering plans and specifications; these should show the location of the structure and outlet works, the high water line, current location of streams and rivers, ancillary facilities, section corner ties, legal description, and acreage by land status
    c. design must include special mitigation facilities/requirements such as fish ladders, controlled discharge, minimum flow requirements; it must also include emergency spillway and outlet works, design frequency storm, area capacity curves/charts, hydropower potential, planned recreation facilities, e.g. boat ramps, parking lots
    d. list any temporary use areas that will be needed

4. Additional Components of the Right-of-way
    a. state water rights involved
    b. dam safety standards
        1) hazard rating and emergency action plan
    c. temporary and permanent access roads
    d. power lines
    e. irrigation ditches
    f. availability of the reservoir for public recreation purposes
    g. list any existing components on and off public land
    h. list possible future components on and off public land
    i. location of equipment storage areas

5. Site Selection
    a. water quality monitoring
    b. hydrological data such as rainfall, stream flow, sedimentation
    c. major geologic and soil features, including sand and gravel deposits, clay sources, siltation, soil susceptibility to piping or settling
    d. alternate locations available
    e. seismic considerations
    f. downstream developments and land use
    g. water quality
    h. all known water rights
    i. access and whether is exists or needs to be developed
    j. a description of what will be inundated

6. Government Agencies Involved
    a. other Federal offices that are involved
    b. state and local agencies that are involved

7. Construction of the Facilities

a. construction (brief description)
    1) major facilities (including vehicles and number of tons and loads)
    2) ancillary facilities (including vehicles and number of tons and loads)
b. work force (number of people and vehicles)
c. flagging or staking the right-of-way
d. clearing and grading
e. facility construction data
    1) description of construction process
f. access to and along right-of-way during construction
g. contingency planning
    1) holder contacts
    2) BLM contacts
h. safety requirements
i. industrial wastes and toxic substances

8. Resource Values and Environmental Concerns
    a. address at level commensurate with anticipated impacts
    b. anticipated conflicts with resources or public health and safety
        1) air, noise, geologic hazards, mineral and energy resources, paleontological resources, soils, water, vegetation, wildlife, threatened and endangered species, cultural resources, visual resources, BLM projects, recreation activities, wilderness, etc.

9. Stabilization and Rehabilitation
    a. soil replacement and stabilization
    b. disposal of vegetation removed during construction (i.e., trees, shrubs, etc.)
    c. seeding specifications
    d. fertilizer
    e. limiting access to right-of-way

10. Operation and Maintenance
    a. safety
    b. industrial wastes and toxic substances
    c. inspection and maintenance schedules
    d. work schedules
    e. fire control
    f. long term access
    g. signs
    h. inspections
    i. contingency planning

11. Termination and Restoration
    a. hazard analysis and liability
    b. design changes
    c. removal of structures
    d. obliteration of the roads and earthwork
    e. stabilization and re-vegetation of the disturbed area